

## REMARKS

The above Amendments and these Remarks are in reply to the Office Action mailed September 8, 2004.

Currently, claims 1-17, 19-22, 24-26, 30-32, 39, 41, 43, 45, 48-52, 56, 58, 62, 64, 67-72, 75 and 77 are pending. Claims 18, 23, 27-29, 33-38, 40, 42, 44, 46, 47, 53-55, 57, 59-61, 63, 65 - 66, 73-74, 76, and 78-79 have been cancelled.

### I. Claim 10

The Examiner indicated that claim 10 was “objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.” [Office Action, p. 30]. In accordance with the Examiner’s conclusions, Applicant has rewritten claim 10 in independent form to include most of the limitations of the base claim and intervening claim 9. Small changes were made to clarify the claim.

### II. Claim 1

Claim 1 was rejected under 35 U.S.C. §102(e) as being anticipated by Os (U.S. Patent Application Publication No. 2002/0162053). Because Os does not disclose all of the limitations of amended claim 1, Applicant asserts that claim 1 is in condition for allowance.

Applicant patent application discloses technology for determining whether a routine has stalled. Figures 1 and 2, as well as pages 6-12 of Applicant’s specification, described a set of embodiments that modify existing code of a software entity in order to add functionality to determine whether a routine has stalled. These features are included in amended claim 1, which recites “changing said existing code [for the first routine] and adding new code; and using said new code and said changed existing code to determine if said first routine has stalled.” These limitations are not found in Os.

Os discloses a Check Alive Thread [see Os, Fig. 1 and ¶¶00023, 27 and 28] to “detect when the target application has hung, i.e., become non-responsive to user input.” [Os, ¶00023]. Os also discloses that when “a process is started on the user machine, the agent ‘hooks’ (installs code realizing an application hook for) that process.” [Os, ¶00023]. While Os, therefore, does disclose

adding new code, Os does not disclose changing existing code. Claim 1 requires the adding of new code and the changing of existing code. Because Os does not disclose the changing of existing code, Os does not anticipate claim 1. Furthermore, Os does not disclose using the changed code to determine if the routine has stalled, as required by claim 1.

Applicant asserts that the failure to disclose the changing of existing code is a significant difference and certainly not an obvious variation. Applicant's specification provides one example of a manner of changing existing code on pages 7-12. On the other hand, Os does not have any discussion of changing code or how to change code. Therefore, Applicant asserts that claim 1 is patentable over Os.

For the same reasons as discussed above with respect to claim 1, Applicant asserts that all claims that depend from claim 1 are also patentable over the cited prior art. Even those claims that are rejected under 35 U.S.C. §103 are patentable because the rejections under §103 are based on the rejection of claim 1 under §102.

Additionally, the claims that depend from claim 1 include additional limitations that distinguish the prior art. For example, claim 2 recites that the "existing code is modified prior to starting execution of said existing code." This limitation is not taught or suggested by Os. Claim 3 recites a user created rule, which also is not taught or suggested by Os. Claim 4 recites the adding of object code instructions to the routine being monitored in order to start and stop a timing mechanism. No such object code instructions are disclosed in Os because Os uses a "pinging" method rather than changing the routine being monitored to identify start and stop times.

Claim 5 requires that the second instruction of claim 4 is executed at all exits. This concept is not taught or suggested by Os. The Examiner takes Official Notice of facts to assert that the limitations of claim 5 would be obvious. Applicant respectfully disagrees and requests that the Examiner provide evidence of the facts supporting the Examiner's assertions. Applicant asserts that there are various ways within the software environments to deal with exceptions.

Claim 6 references a method associated with an object, where code is added to the method to call new code. This concept is not taught or suggested by Os.

Claim 9 recites the receiving of an indication that the routine has completed. As explained below with respect to claim 13, this limitation is not taught or suggested by Os.

Claim 12 recites that “said first routine is a thread executing a method, said indication that said first routine has completed indicates that said thread has exited said method.” On page 16 of the Office Action, the Examiner admitted that these limitations are not taught by Os. However, the Examiner takes Official Notice that is was “well held by the computer programming community prior to the time of invention to clean up processes and objects instantiated by a routine when the routine is terminated ...” [Office Action, p. 16] The Examiner, therefore, concludes that “it would have been obvious to one of ordinary skill in the art of computer programming to stop any timers for monitoring a routine which were created by the routine when the routine exits, thus preventing memory leakage and garbage build up in the memory space.” First, Applicant respectfully disagrees and requests that the Examiner provide evidence of the facts supporting the Examiner’s assertions. Second, even if everything the Examiner says is true, the Examiner did not address the language in claim 12. That is, the Examiner never found a suggestion or motivation for using an indication that a thread is leaving a method. In fact, Os teaches away from such because Os uses a “pinging” method [see Os, ¶0023].

### III. Claim 52

Claim 52 recites “changing object code ...” As discussed above with respect to claim 1, Os does not disclose changing object code. Therefore, Os does not anticipate claim 52. Furthermore, claim 52 is not obvious in light of Os because Os takes a different approach. Rather than changing object code, Os using the “pinging” method referenced above. Thus, Applicant asserts that claim 52, and all claims that depend from claim 52, are patentable over the cited prior art.<sup>1</sup>

### IV. Claim 58

Claim 58, and all claims that depend from claim 58, are patentable over the cited prior art for the same reasons as discussed above with respect to claim 1.

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<sup>1</sup> The claims depending from claim 52 (and other independent claims) provide additional limitations that further distinguish the cited prior art, as described above with respect to the claims that depend from claim 1.

V. Claims 13

Claim 13 was rejected under 35 U.S.C. §102(e) as being anticipated by Os. Because Os does not disclose all of the limitations of amended claim 1, Applicant asserts that claim 13 is in condition for allowance.

Claim 13 covers embodiments that use indications that a routine has started and completed to determine if the routine has stalled. On the other hand, Os does not determine whether a routine has stalled based on knowing when a routine started and completed. Instead, Os pings the routine and waits to see if the routine responds. As such, Os does not disclose the steps of “receiving an indication that said particular routine has completed” and Os does not disclose “reporting said particular routine as stalled if said indication that said particular routine has completed is not provided prior to being overdue” as recited in claim 13. Thus, Applicant asserts that claim 13 is not anticipated by Os. Furthermore, the limitations of claim 13 are not taught or suggested by Os because Os provides a different approach (e.g., pinging), which teaches away from Applicant’s invention. Therefore, Applicant asserts that claim 13, and all claims that depend from claim 13, are patentable over the prior art.

VI. Claims 64

Claim 64, and all claims that depend from claim 64, are patentable over the cited prior art for the same reasons as discussed above with respect to claim 13.

VII. Claim 72

The Examiner stated that original claim 78 was allowable, but objected to as being dependent on a rejected base claim. Applicant has amended claim 72 to include limitations similar to original claim 78. These limitations are not taught or suggested by Os. Therefore, Applicant asserts that claim 72, and those claims that depend from claim 72, are patentable over the cited prior art.

VIII. Claim 39

Claim 39 recites “receiving an indication that a particular method of an object is running; and

automatically determining whether said method has stalled by detecting whether a thread entered said method and did not return within an approximation of an expected time frame. As explained above, Os does not disclose “detecting whether a thread entered said method and did not return within an approximation of an expected time frame.” Os does not test for a thread returning from a method. Additionally, Os does not disclose performing its analysis at the granularity of a method of an object. Therefore, Applicant asserts that claim 39, and those claims that depend from claim 39, are patentable over the cited prior art.

IX. Claim 45

Os does not disclose all of the limitations of claim 45. Claim 45 recites “receiving an indication that said first routine has completed ... stopping said timing mechanism in response to receiving said indication ...” As discussed above, Os does not disclose or suggest the receipt of or use of an indication that the first routine has completed. Os does not make use of that information. Rather, Os uses a “pinging” approach. Therefore, claim 45 is patentable the cited prior art. For the same reasons as claim 45, Applicant asserts that the claims that depend from claim 45 are also patent over the cited prior art.

X. Claims 39, 52-57 and 64-71

Claim 39 was objected to on page 2 of the Office Action. Applicant corrected the mistake.

Claims 52-57 and 64-71 were rejected under 35 U.S.C. §101. Applicant disagrees with the rejection. However, to expedite prosecution, Applicant made the amendments suggested by the Examiner.

XI. Response to Official Notice

In various places in the Office Action, the Examiner uses “Official Notice” to assert various facts, without providing any support for those facts. The Examiner then uses those unsupported facts to conclude that various limitations not found in the cited prior art are obvious. Applicants hereby traverse that Official Notice and request that the Examiner provide factual evidence to support the assertions.

XII. Information Disclosure Statement

With this Response, Applicant is submitting an Information Disclosure Statement ("IDS"). Applicant respectfully requests that the Examiner consider the prior art cited in the IDS.

XIII. Conclusion

Based on the above amendments and these remarks, reconsideration of claims 1-17, 19-22, 24-26, 30-32, 39, 41, 43, 45, 48-52, 56, 58, 62, 64, 67-72, 75 and 77 is respectfully requested.

The Examiner's prompt attention to this matter is greatly appreciated. Should further questions remain, the Examiner is invited to contact the undersigned attorney by telephone.

Enclosed is a PETITION FOR EXTENSION OF TIME UNDER 37 C.F.R. § 1.136 for extending the time to respond.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 501826 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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